

Work Order ID 146728

Friday, May 20, 2016 3:26:51 PM

647.1404
B146728
REV. B

146728

Page 1

Item ID: 647.1404

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Upper Cutter Assembly

Start Date: 5/24/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/7/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: Qm

Date: 16/05/24

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
647.1400	B

110	Pick Kit	0.00							
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110

Packaging

Memo

Packaging

120		0.00							
-----	--	------	--	--	--	--	--	--	--

120

Small Fab

Memo

Small Fab

Assemble as per dwg and apply loctite 598 on all faying surfaces per note 2.

A/R RTV LOCTITE 598: 135047
exp. date: 01/18

130	QC5- Inspect part completeness to step on W/O	0.00							
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130

QC

Memo

Quality Control

0.02

DAS
36
9-89

JUL 19 2016

IX

DAS
36
9-89
16/07/21

DAS
36
9-89

JUL 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER: _____							
Misidentified ☐	Past Due ☐								

Work Order ID 146728

Friday, May 20, 2016 3:26:51 PM

146728

Page 2

Item ID: 647.1404

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Upper Cutter Assembly

Start Date: 5/24/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 6/7/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: <u>CLK048</u>	0.00							
140									
Packaging	Memo	0.01							68-8 9 SW
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***								
150	QC21- Final Inspection - Work Order Release	0.00							
150									
QC	Memo	0.10							
Quality Control									

/ JUL 27 2016 68-8
9
SW

DAS
21
9-89 JUL 28 2016

DAS
21
9-89 JUL 28 2016

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Friday, May 20, 2016 3:26:57 PM

Page 1

Work Order ID: 146728

146728

Parent Item: 647.1404

647 1404

Parent Item Name: Upper Cutter Assembly

Start Date: 5/24/2016

Required Date: 6/7/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 16.03.28 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.9703 *646 9703* Cutter Sub Assembly		Manufactured	No				Each	0.0000		1			DAS 8 8-89
									**	146990			
647.1513 *647 1513* Upper Deflector		Manufactured	No				Each	1.0000		1			DAS 8 8-89
									**	146730			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK015				1					
				142552				1					
MS21042L08 *MS21042L 08* Nut		Purchased	No				Each	1,028.000		3			DAS 8 8-89
									**	134962			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				319					
				m133134				3					
				m134063				316					
				ST303				537					
				m133922				37					
				m134574				200					
				m134654				300					
				ST308				172					
				m134376				172					

JUL 19 2016

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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

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Page 2

Work Order ID: 146728

146728

Parent Item: 647.1404

647 1404

Parent Item Name: Upper Cutter Assembly

Start Date: 5/24/2016

Required Date: 6/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-08-19

Purchased

No

Each

526.0000

3

MS27039-08-19

Screw

Location

Loc Qty

Loc Code

DAS

GA

227

0

m132930

84

9-89

m133077

22

m134063

121

over006

100

m134294

100

3

ST277

199

m134142

199

NAS1149FN832P

Purchased

No

Each

2,045.000

6

NAS1149FN832P

Washer

Location

Loc Qty

Loc Code

DAS

GA

475

0

M133316

16

9-89

M133769

459

ST260a

1200

M134257

1200

6

ST264

370

M133709

370

JUL 19 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

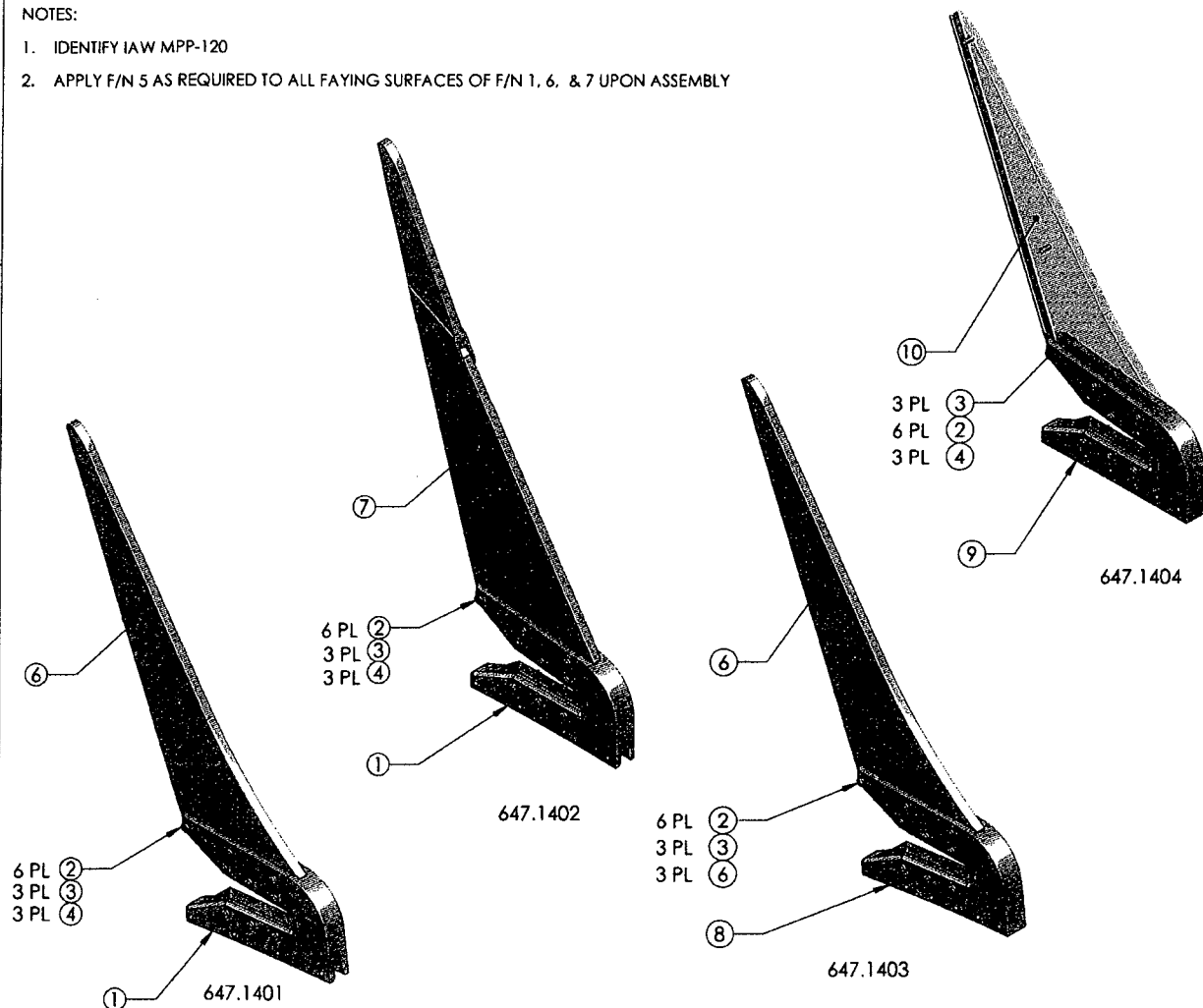
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NOTES:

1. IDENTIFY IAW MPP-120
2. APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 1, 6, & 7 UPON ASSEMBLY

REVIEWS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: P91		N/C
N/C	INITIAL RELEASE	06/15/09	P. BRAVO
A	INCORPORATED ECH'S 02942 & 03911	06/07/10	P. BRAVO
B	INCORPORATED ECH'S 05330	02/28/16	P. BRAVO



1				10	647.1513	UPPER DEFLECTOR		
1				9	646.9703	CUTTER SUB ASSY		
	1			8	646.9702	CUTTER SUB ASSY		
		1		7	647.1501	LOWER DEFLECTOR ASSY		
	1			6	647.1510	UPPER DEFLECTOR		
A/R	A/R	A/R	A/R	5	601.2045	RTV, LOCTITE 598		
3	3	3	3	4	601.1541	NUT	MS21042L08	
3	3	3	3	3	601.2765	SCREW	MS27039-0819	
6	6	6	6	2	601.2764	WASHER	NAS1149FN832P	
		1	1	1	646.9701	CUTTER SUB ASSY		
X					647.1404	CUTTER ASSY (UPPER)		
	X				647.1403	CUTTER ASSY (UPPER)		
		X			647.1402	CUTTER ASSY (LOWER)		
			X		647.1401	CUTTER ASSY (UPPER)		
1404	1403	1402	1401	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY					PARTS LIST			
NEXT ASSY (S)					ORIGINAL DATE 06-15-09			
647.1300					DRAWN BY J. GARDNER P. BRAVO			
					DRAWING APPROVAL P. BRAVO 06-15-09			
					CONTRACT NO.			
					UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
					DART 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300 APCAL INDUSTRIES, INC. DBA DART AEROSPACE CUTTER ASSY			
					SIZE 8	CAGE CODE 07M16	DWG. NO. 647.1400	REV. B
					SCALE NONE SHEET 1 OF 1			

w/o 146728

dm 16/05/24